

# Sustainable Quality of Life

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# Sustainable Quality of Life

The Sustainable Quality of Life (SQoL) working group focuses on large-scale factors that reduce sustainability:

- Growth of per-capita consumption
- Growth of population



$$I = C * P * T$$

Impact =

Consumption (per-capita) \*  
Population \*  
"Tech Factor" (efficiency, etc.)



# Consumption

Per-capita consumption grows approximately as fast as, or faster than, income grows.

To the extent that GHGs are proportional to energy consumption, GHGs are proportional to income growth.



# Population

Population growth makes it harder to solve almost every problem:

- Traffic congestion
- Lack of affordable housing
- Shrinking recreational opportunities
- Pollution
- Overcrowded classrooms

"We can't grow our way out of the problems of growth!"



# Population

## Population Growth Rates:

- World: 1.6%
- U.S.: 1%
- California: approx 2% (fluctuates widely)
- Mountain View:
  - 1980-1990: 1.5%
  - 1990-2000: 0.5%
  - 2000-2006 (est): slight decrease (probably due to dot-com bust)



# "Tech Factor"

Technology and efficiency, including

- Durability vs. Disposables
- Planned Obsolescence
- etc.

Note: Money saved through energy efficiency is spent on other things, which themselves use energy. Thus energy consumption is roughly proportional to income *even when efficiency increases!*



# Technology Won't Solve the Problem

As technology increases, we consume more.

Examples:

- When automobile engine efficiency increased 30%, 29/30 was used to increase horsepower and 1/30 to increase fuel efficiency.
- Airplane fuel efficiency increases 1% per year, but air travel increases 3% per year.



# Technology Has Side Effects

For example:

- Plastic has helped preserve food, but has added non-biodegradable waste.
- Fluorescent bulbs contain mercury, which is a neurotoxin.
- CFCs replaced ammonia in refrigerators, but damaged the ozone layer -- something we only detected by accident.
- Pesticides and herbicides.

It's hard to predict the size of the problems, and therefore it is hard to calculate the cost/benefit ratio of new technology.



# Infinite Growth is Impossible

In a finite world, infinite growth of any factor (consumption, population) is impossible.



# "Safety Margin" and Disaster Planning

Systems that grow to 100% of carrying capacity become "brittle" and less able to withstand shocks.

"Disasters are the new 'Normal'".

Need to keep a safety margin.

- Water
- Land
- ...



# What Is the Purpose of an Economic System?

The purpose of an economic system is to make you satisfied, but the purpose of our economic and advertising system is to make you DISSatisfied so that you will buy more. Our system is designed to make you unhappy!



# Wrong Goals / Wrong Measurements

Our current system is "shooting itself in the foot" because:

- our economic measurements are only loosely related to our goals, and
- when there's a mismatch between goals and measurement techniques, we rewrite the goals in terms of what we can measure, rather than rewriting the measurement technique to match our goals.



# What Is Our Goal?

Ultimately, the goal of any economic or political system is (or should be) to maximize current "quality of life" without reducing future quality of life. (If this sounds like it's related to the definition of "sustainability", that's no coincidence.)

Quality of life means different things to different people, but maximizing it is always our goal.



# Wrong Measurements

Our primary measure of progress is GDP/GNP.

But GDP does not approximate quality of life because:

- GDP measures *activity* , not *benefit* (war, disease, building prisons)
- GDP omits non-economic factors (sense of community, relaxation)
- GDP is not always corrected for population growth
- GDP ignores people with no income (if you don't spend, you don't exist)



# Right Measurements

For example,

- GPI (Redefining Progress)
  - Subtract:
    - crime / national defense
    - pollution
    - loss of leisure time
  - Add
    - unpaid domestic work
    - volunteer work
- Quality of life



# Recommendations: Economics

## Economics and Consumption:

- Measure and improve net economic benefit or quality of life (such as GPI), not just economic "activity" (GDP).
- Internalize "external costs" (economists' term for pollution, etc.) to the extent possible.
- Tax extraction of resources (especially non-renewable resources) at a high rate.
- Encourage use of recycled and second-hand products (directly by encouraging them (ala farmer's market) and perhaps in part by taxing them at a lower rate).



# Recommendations: Quality of Life

## Consumption and Quality Of Life:

- Rather than focussing *solely* on increasing production and consumption, offer people the choice of increasing leisure time.



# Recommendations: Sustainable Population

Slow and eventually halt population growth:

- Reduce population growth by increasing access to family planning (60% of pregnancies in California are unintended!).
- Expand public information about family planning services.
- Reduce population growth by decreasing subsidies that encourage population growth (such as health insurance rates that are the same no matter how many children a family has).



# Safety Margin

- Maintain our local groundwater supply.
- Preserve open space for emergency use (e.g. after earthquakes).



# Recommendations: Politics

## Political changes:

- Environmental Sustainability should be a "built-in" part of the political process, not a temporarily grafted-on afterthought, especially for development decisions. Therefore:
  - Environmental Sustainability should be a permanent part of government, not a short-term task force.
  - Environmental Sustainability should be represented on the Planning Commission (and potentially elsewhere).